AMERICAN CAN COMPANY Boston & Hudson Streets Baltimore City Maryland HAER NO. MD-63

HAER MD, 4-BALT, 125-

PHOTOGRAPHS

Historic American Buildings Survey
National Park Service
Department of the Interior
Washington, D.C. 20013-7127

Addendum to
American Can Company
(Norton Tin Plate and Can Company)
Boston and Hudson Streets
Baltimore City
Maryland

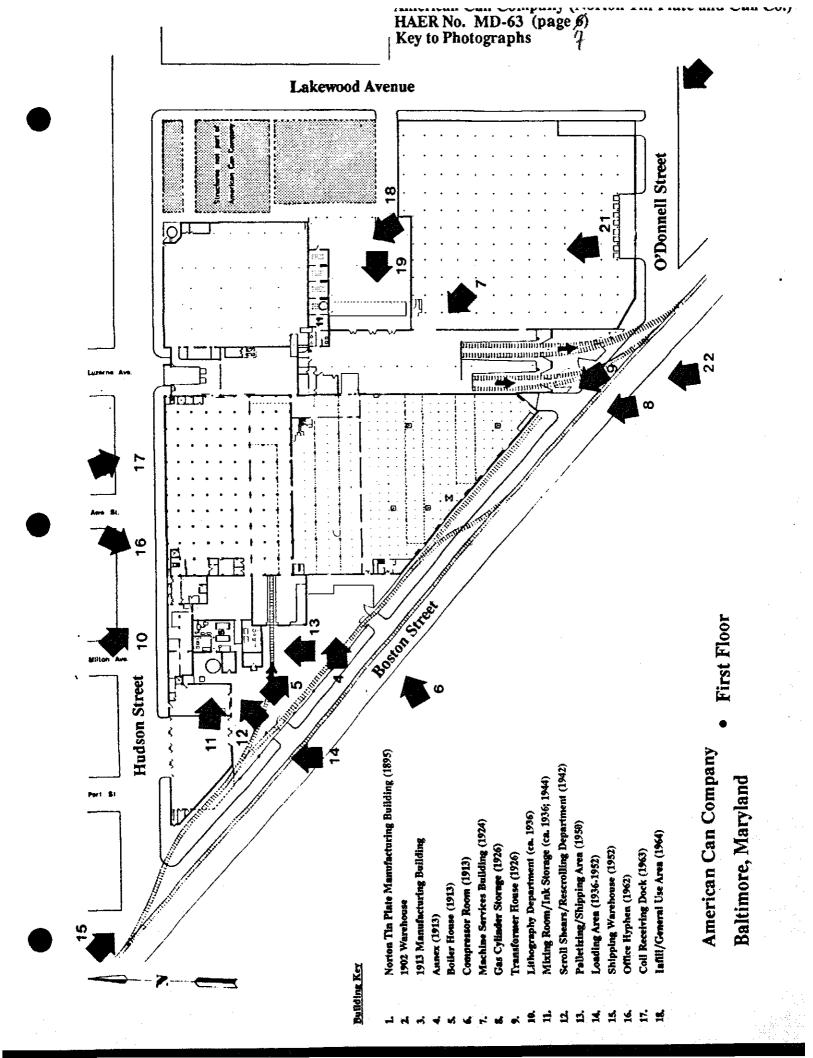
HAER No. MD-63

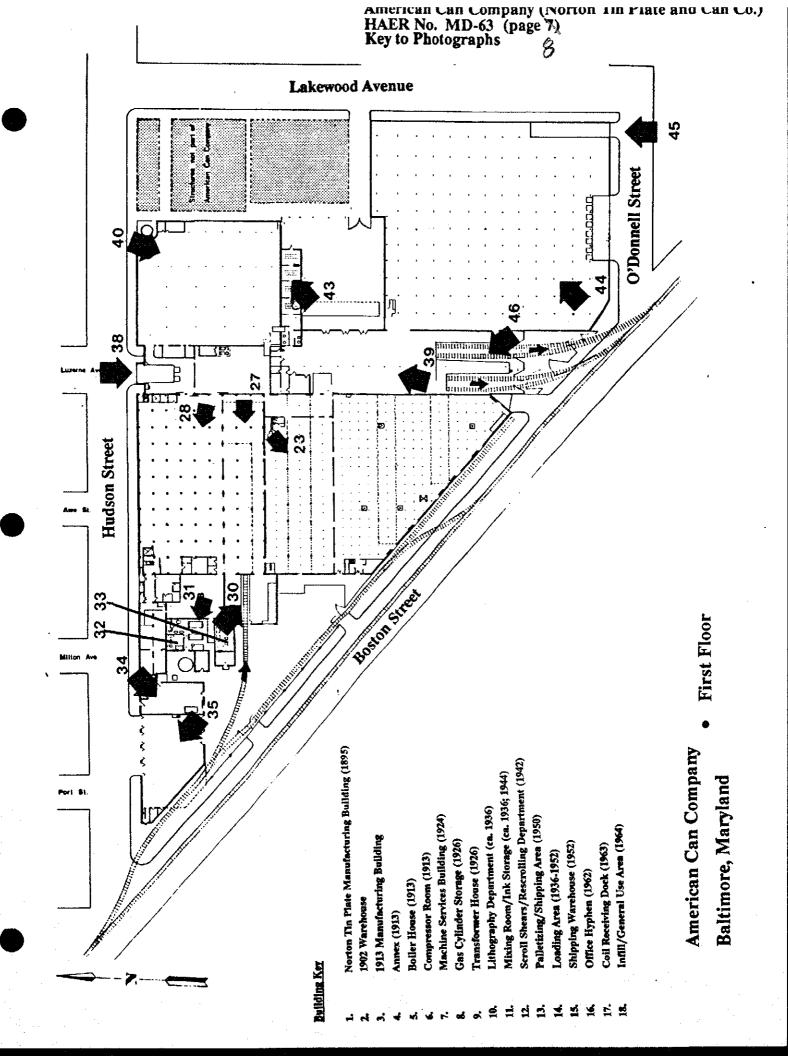
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

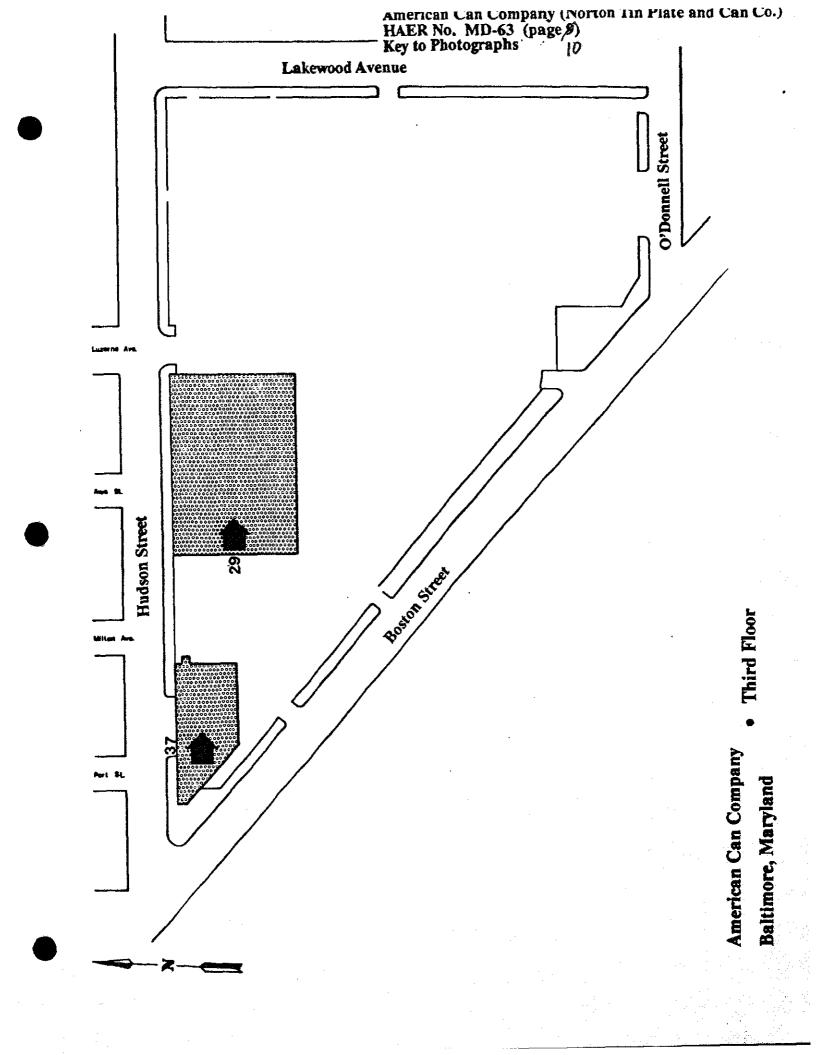
HISTORIC AMERICAN ENGINEERING RECORD
MID-ATLANTIC REGION, NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR
PHILADELPHIA, PENNSYLVANIA 19106





Second Floor

Baltimore, Maryland



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HISTORIC AMERICAN ENGINEERING RECORD

Addendum to:

AMERICAN CAN COMPANY

HAER NO. MD-63

(NORTON TIN PLATE AND CAN COMPANY)

Location:

Boston and Hudson Streets, Baltimore, Maryland

Date(s) of Construction:

1895 - 1964

Present Owner:

American National Plaza Limited Partnership

Washington, D.C.

Present Occupant:

Vacant

Present Use:

None

Significance:

The American Can Company became the world's largest can-making company in 1908 when it purchased the Sanitary Can Company of New York. Acquisition of this site, the Norton Tin Plate Company, was crucial to its growth and helped provide the impetus for this merger. Among the first to use a fully automated production line, this plant was also instrumental in the development of the sanitary can, which was universally adopted

prior to World War I.

Project Information:

This documentation was undertaken in October 1988 in compliance with a Memorandum of Agreement among the Michael Swerdlow Companies, The Advisory Council on Historic Preservation, and the Maryland State Historic Preservation Officer.

Frances Alexander, Senior Architectural Historian Neal Vogel, Architectural Historian Linda Shopes, Historian Engineering-Science, Inc. 1133 15th Street, N.W., Suite 900 Washington, D.C. 20005

Architectural Descriptions of Existing Structures

Description of Site:

American Can Company is located on a 9.5 acre, triangular site, north of the Baltimore Harbor and south of the residential neighborhoods of Canton and Highland town. Boston Street, which runs in a northwesterly-southeasterly direction, forms the southern border of the property. Hudson Street forms the northern border, and Lakewood Avenue, the eastern boundary. Lucerne Avenue (also spelled Luzerne on some historic maps) once divided the site, but the street was abandoned earlier in the century. Subsequently, structures were built over the street to form one contiguous complex. Rail tracks along Boston Street are still visible as are those which went north on Lucerne Avenue. The spurline which paralleled the northern border along Hudson Street has since been paved for sidewalks. The southwest portion of the site is, in effect, a freight yard.

The complex is presently an accretion of adjoining buildings, representing expansion over a seventy year period. The westernmost section contains the service-related structures: Machine Service Building, office buildings, and power production facilities. Production, from the receiving of raw materials to shipment of finished products, proceeds roughly from the center of the site towards the east. The following architectural descriptions correspond generally to this geographic and process relationship.

Evolution of Site (Plan):

According to atlases of 1876, the present site of the American Can Company was vacant. Although the Philadelphia, Wilmington & Baltimore Railroad had tracks on Boston Street, the southern boundary, the Sanborn map of 1890 shows the site divided into three parcels, divided by Cannon and Lucerne Streets. The mid-portion, presently occupied by the Manufacturing Building, the Norton Building and the 1902 Warehouse, contained the ruins of a rolling mill. The eastern section contained the George Tyler Lumber Yard, comprised entirely of wood frame structures. The western portion was vacant. The surrounding area was densely developed, including oyster and fruit packers on the waterfront to the south and residential neighborhoods to the north.

By 1902, the site is listed as the American Can Company - Norton Factory. The two story Norton Building is shown on this map with two, one story sheds (shipping docks) on the front and rear (facing on Lucerne). These sheds are marked as constructed of corrugated iron. The first floor was a storage area with production on the second. (The 1902 Warehouse is not shown on the 1902 Sanborn, and south of the Norton Building was vacant.) North of the Norton Building were two freestanding buildings. The middle building was a small, two story brick structure, the front of which contained an engine and dynamo room and machine shop. The solder room and boiler room were located to the rear. The northernmost building was a one story, brick structure containing a sorting and tin plate storage room, a factory section, pickle room, and block plate storage. There were no other buildings on the site. Across Lucerne Street, was the Canton Box Company, but otherwise this parcel of land was vacant. The three building site was well-served by rail.

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 3)

Spurlines ran between the buildings and on the south side of the Norton Building. Iron bridges at the second story connected the buildings across the tracks.

The 1914 Sanborn map indicates that Cannon Street (now Milton Street) had been closed to traffic. West of Lucerne Street, the site had assumed much of its present configuration although some buildings which appear on the map were later replaced. The property east of Lucerne did not belong to American Can at this time, but rather was occupied to Lakewood Avenue by the Canton Lumber Company. The 1902 Warehouse appears on this map with a spurline separating it from the Norton Building which by this date was being used for shook (the parts used to assemble packing boxes) and can storage. Manufacturing Building is shown with tin plate storage and shipping located on the first floor and can-making on the third. There was a hospital, kitchen, dining room, and offices on the second floor. The present Annex building was constructed in 1913 and contained the solder refinery and metal storage and compounding room. The current Boiler House was called the gas producing plant and was also constructed in 1913. There was a smaller, two story machine service building which was evidently demolished for the construction of the present Machine Services Building in 1924. The first machine services building was also located in the northwest corner of the site. Between this building and the solder building was a wagon shed. A shook shed stood west of the Norton Building. In addition to the spurlines which ran between the buildings, two new spurlines had been added by 1914. One paralleled the north elevations along Hudson Street. The other spurline ran north on Lucerne Avenue paralleling the then eastern boundary of the site and allowing for rear loading from the Norton Building and the 1902 Warehouse.

Between 1914 and 1930, only the construction of the Machine Services Building in 1924 altered the site configuration west of Lucerne Avenue. East of this street, the construction of the western section of the Lithography Building (prior to 1936) marked the first expansion of the complex eastward. World War II led to the rapid expansion of the site with the wartime demand for tin plate. (Not surprisingly, World War II was the period of peak employment for American Can.) This demand and the closing of Lucerne Avenue in the mid-1930s led to the infill construction of Lucerne. During World War II, the Loading Area (with access to Hudson Street), the Scroll Shear Department, and the Ink Storage Room were added. With the increasing use of trucking for shipment, the Palletizing Department and the Shipping Warehouse were added in the early 1950s. Also as part of this final construction campaign, the eastern portion of the Lithography Department was added. Since this time, there has been little alteration to the site. The only exception was the enclosing of the Coil Receiving Dock in 1963 and the resulting creation of an infill space to the north of this receiving area.

Machine Services Building (1924):

The Machine Services Building is located in the northwest corner of the complex on a triangular-shaped site. Constructed in 1924, the building is roughly rectangular in plan although the southwest corner is canted to fit the site. The four story building is of conerete, flat slab construction and measures 85' X 200'. The concrete grid structure (created by the floor slabs and posts) is exposed on the exterior and infilled with a 3' brick base and banks of steel sash factory windows. There is a flat, concrete cornice and brick parapet. In the northeast corner, there is a stairwell tower which rises above the height of the roof. Along the north elevation, there is a series of rail loading bays with doors which

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 4)

appear original. The doors are constructed of diagonal, beaded board with beveled cross bracing, steel I-bearn lintels, and fixed light transoms. The center three bays were used for truck loading. These truck bays have louvered doors constructed of the same diagonal beaded board. In the upper portion of these doors are twelve, fixed light windows. The northwest corner of the building is canted with an entrance which faces the intersection of Boston and Hudson Streets. This entrance has double wooden doors with six fixed light windows in the upper portion. There are concrete door surrounds and a bracketed concrete entablature. Floret medallions are located below the brackets. On the south elevation, there is a three-sided bay on the second, third, and fourth stories which forms a canopy over the first story rail siding. The spurline leads into the central freight yard of the complex. The eastern three bays of the second floor have been altered. Vertical wood siding and pairs of single light, casement windows replace the brick base and steel sash windows. The two central bays of the first floor were used for truck shipment as are the eastern two bays. These doors also appear original using the same diagonal beaded board and cross bracing as those on the north elevation. Two spurlines ran along the north and south elevations while trucks had access to both Boston and Hudson Streets.

The first floor is divided into two sections. The westernmost was used as a truck garage. The five truck bays (two on the south and three on the north) allowed easy access because the site is narrow at this point. The second bay from the west on the north elevation was altered to accommodate a smaller roll garage door with concrete block infill. The smaller eastern section contained a workshop. There were two smaller, truck bays on the south elevation with original doors. The eastern bay of this section contains hinged, wooden double doors, and the western, a sliding wooden door. A parts washer is extant and located just north of the sliding loading door. Large scales are located just north of the door leading to the garage. A brick partition wall divides the two areas of the first floor. The upper floors all have flared concrete posts and wood block floors. The second floor contains offices including the payroll department. This floor has undergone extensive alteration although certain areas remain intact. Several offices have original metal panel partition walls and pressed tin ceilings. Some stylized Art Deco detailing is visible in the payroll office. Offices along the south wall have undergone heaviest alteration with the addition of a dropped, acoustic tile ceiling, parquet floors, and wood wall paneling. The third and fourth floors were machine repair areas. Interior divisions on the third and fourth floors correspond to the first floor. The larger western sections of these upper floors were used for equipment repair and general service areas.

Annex (1913):

Now connecting the Machine Services Building and the 1913 Manufacturing Building is a two story structure. After the construction of the Machine Services Building in 1924, this annex linked the east elevation of the Machine Services Building with the west elevation of the Office Hyphen on the north side. The two story Annex is rectangular in plan and measures 35' X 110'. This building also has a concrete slab structure with a 3' brick base between the articulated grid. Above the base are banks of steel sash factory windows. The gable roof has a monitor covered in corrugated metal. The interior walls are concrete block. The Annex was originally built as a solder refinery and metal storage area according to the 1914 Sanborn map. Located on the second floor was the compounding room which was connected to the 1913 Manufacturing Building by a covered iron bridge. With changes in technology, the solder refinery was closed, and the building was used for auxillary

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 5)

purposes. Most recently, there were men's and women's locker rooms on the first floor and a lunch room on the second floor.

Boiler House (1913):

The Boiler House joins the Annex on the south to form a T-shaped configuration. The one story Boiler House is rectangular in plan and measures 45' X 65', and 30' tall. The building has a steel frame articulated in an arcaded brick veneer. The hipped roof has a monitor supported by a Pratt truss. The roof is sheathed in corrugated metal. There were originally two levels of windows although only the upper level windows on the west elevation are extant. These are steel sash factory windows. The other windows have all been infilled with concrete block (steel I-beam lintels visible). There are two metal fire doors on the south end of the west and east elevations. The west door leads to the freight yard, and the east door to a general use area which connects to the Manufacturing Building. There are two doors on the west elevation which appear original. Both are made of diagonal beaded board with cross bracing. Both also have four/four fixed light transoms. The south end of the Boiler House is the Gas Compressor Room which measures 25' X 45'. In the northwest corner of the Boiler House is a brick room which contains fire equipment and generators. Above this is a smaller room which contains the central electrical control panel. The panel appears original with copper circuitry.

The boilers were manufactured by the Cleavor Brooks Packaged Boilers of Milwaukee and are dated 1959. In the fire equipment room is a centrifugal fire pump manufactured by Goulds Manufacturing Company (n.d.). Also in this room is an early twentieth century induction motor manufactured by the Northwest Manufacturing Company of Milwaukee (n.d.). The gas compressors were manufactured by the Chicago Pneumatic Tools Company. The label on the electrical panel reads: "Polyphase Integrating Wattmeter, Westinghouse, Pittsburg (sic), Pa., patented 1898." Built as the gas producing plant in 1913, it became the Boiler House sometime between 1914 and 1951. Built at the same time as the Manufacturing Building, which was heated by steam radiators, the Boiler House was most likely the source of all hot water, both for heating and processing.

Transformer House (1926):

North of the west entrance to the Boiler House is the Transformer House, a small, brick veneered structure. The one story, rectangular building measures 20' X 30'. It has no openings except one metal door in the west elevation, south of which is one, three/three fixed light window. The building has a flat roof with terra cotta coping. North of this structure is a steel water tank with riveted connections, measuring roughly 20' in diameter. The construction of the transformer house illustrates the increasing use of electricity by the 1920s in the can-making process, a process which had been fully automated by the turn of the century.

Gas Cylinder Storage (1926):

South of the west entrance to the Boiler House is a small, brick building, measuring 20' X 27'. The roof is flat with terra cotta coping. This storage room has only one opening, a single metal door in the west elevation. There is a concrete block partition wall which

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 6)

divides the cylinder storage room from the compressor room. This wall does not extend the full height of the elevation, allowing a 3' to 4' access between the two rooms below the roofline. Although the type of gas stored is not known, the size of the gas storage building suggests that it was used for a type of processing, probably in metal working, rather than for heating. Because this was a storage building, it also seems evident that the gas was purchased from an outside source and stored on the premises.

Office Hyphen (1962):

Between the Annex and the Manufacturing Building is a two story, rectangular building in which the primary entrance to the complex is located. The hyphen has a brick veneer on the first story while the second story is sheathed in corrugated metal. There are small, awning style windows in the second story. The gable roof is also sheathed in corrugated metal. The building is recessed 8' to 10' from the Hudson Street elevational line. This recessed area is covered by a shed roof canopy. The canopy protects the first floor entrances located at either end of this elevation. The entrances consist of double metal doors with single lights in the upper portions. Concrete steps, parallel to the building, lead to these entrances. This hyphen was constructed in 1962 and served as the primary entrance to the complex. It contained offices, but apparently its most important function was to connect the Annex (which by the time of construction contained employee service areas) with the Manufacturing Building.

Infill/General Use Area (1964):

This once open area is located between the Manufacturing Building and the Boiler House. It became an interior space with the construction of the Office Hyphen in 1962 and the 1963 enclosing of the Coil Receiving Dock to the south. The roughly rectangular, one story room measures 62' X 80'. (A portion of the Office Hyphen projects into the northeast corner of the room.) There is a steel I-beam frame which abuts the walls and supports the Warren roof truss. The flat roof is covered in corrugated metal. There are no windows with the exception of the infilled windows of the three adjoining buildings. The absence of windows and exterior openings indicate that this was largely a connecting space with little role in can production. There is a substation in the southwest corner next to the entrance to the Boiler House.

Coil Receiving Dock (1963):

South of the General Use Area and connected to the Manufacturing Building on the west elevation is the Coil Receiving Dock. The dock projects into the freight yard from which three rail tracks enter the building. The dock has a concrete dock, 3' above grade, punctuated by three tracks. There are concrete block walls, a steel frame, and small Warren roof trusses supporting a flat, corrugated metal roof. The dock measures 75' X 75', and 25' tall. Large metal fire doors divide the dock from the Manufacturing Building while steel roll doors on the west elevation allow access to the freight yard. There is also one metal door and a three/three light, steel sash awning window north of the southernmost roll door. A large metal chute allows the emptying of scrap directly from the second floor of the Manufacturing Building to a rail car on the northernmost track.

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 7)

Manufacturing Building (1913):

The Manufacturing Building is adjacent to the Norton Building on the north elevation. The Coil Receiving Dock abuts the southwest corner of this factory building, and the rescrolling department is contiguous on the east elevation. The north elevation on Hudson Street is the only exposed elevation. The three story, rectangular building is divided into two, unequal sections. The northern section covers roughly two-thirds of the floor area. The entire building measures 150' X 250'.

The building has a concrete foundation, concrete slab construction, and floor supports of eoncrete piers. The structure is articulated on the exterior creating a concrete grid in which banks of steel sash factory windows and a 3' brick base are located. On the first floor of the north elevation, alternate bays contained loading bays which are now infilled with brick. The westernmost bay contains an original freight door constructed of diagonal, beaded board and beveled cross bracing. The roof is flat with three monitors.

On the interior, each section of the first floor is one large space, broken only by the concrete posts, set roughly 20' apart. The northern section has three floors. The southern portion has only two floors although the two sections are the same height. Also, concrete knee brackets at the height of the second floor indicate that a second floor could be added. The second floor wall dividing the two sections is patchy, faced in structural tile and concrete block. In the west end of this wall, there are four awning windows, now boarded. There are also slits in the wall allowing ventilation between the first floor of the southern section and the machine shop on the second floor of the northern portion. On the south elevation, the infilled segmental arch windows of the Norton Building are visible. Along the east elevation of the southern section, there is a concrete slab passage on the second floor connecting the Norton Building with the second floor. This passage also allows access to the overhead conveyor belts which line the south elevation. The conveyor belts permitted accumulation of cans prior to packing. The first floor of the southern section, adjacent to Coil Receiving, was used for the initial scrolling process. The northern section was the can-end making department.

Along the east elevation of the northern section is a concrete block projection into the room, roughly 50' long from the north which contains a stairwell and freight elevator. In the northwest corner is another freight elevator which also projects into the room. It is connected on the exterior to the only original freight door. In this corner is the door to the Office Hyphen. Along the west elevation is a control room and storage, and the south elevation is punctuated by numerous large openings which connect the two sections of the Manufacturing Building.

On the second floor, all elevations except the south contain banks of factory windows. The southern half of the floor is used as a machine shop with wire partitions. The northern half is used for the offices of the engineering department. These offices have glass and metal panel partition walls. A storage room in the northwest corner, which appears original, is constructed of vertical beaded board. Along the west elevation, there is a metal chute which leads to the Coil Receiving Dock. There is concrete block infill around the opening.

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 8)

The third floor contains three roof monitors, framed in concrete, in which the drying ovens are located. Both the ovens and monitors are barely visible. Located within the open interior along the south elevation is an office. Constructed of concrete block with a glass upper portion, the office seems to have been used for observation of the canning lines. Projecting from the south elevation are also two porcelain tiled rooms, the function of which is unknown. In the southeast corner of this elevation is an office section which projects south. Offices line either side of a central hall. Can-body making took place on this floor which once had sixteen can lines. No equipment, with the exception of the drying ovens, is extant.

Norton Building (1895):

The Norton Building is a two story, brick veneered building, rectangular in plan, and measuring 100' X 255'. It has a mill structure with some lattice I-beam members, and a central, gable roof monitor. Because of later additions to the site, the west elevation is the only exposed side. It faces onto the freight yard. The west elevation has an arcaded brick face. The central portion of this elevation has a stepped parapet under the eave of which are three small, vertical, decorative arcades. This central section has three arcaded bays and three levels of windows. The upper level windows are round-arched, double hung sash windows. The central window is twelve/twelve and the outer two are nine/nine. The second floor has taller, segmental arch, double hung, sash windows. The central window is sixteen/sixteen, and the outer two on this floor are twelve/twelve. All windows have stone sills. The central section is flanked by two aisle arcades which have flat parapets. There are two windows in each of the inner aisle bays. These windows are twelve/twelve light double hung sash windows. The outer two bays have no openings. There is a brick infill wall between the Norton Building and the 1902 Warehouse.

The first floor of the west elevation has had a dock added, and the openings on this floor have been modified. Loading bays have been cut while original bays have been infilled with concrete block. The dock is 4' above grade with a metal shed roof canopy. Part of the Coil Receiving Dock covers the northern bay of this elevation.

The first floor is a large space broken by wooden and lattice I-beam vertical members, approximately 15' tall and set in a concrete floor. There are two, wooden, encased staircases in the northwest and northeast corners. All windows along the north elevation have been infilled with brick (wooden lintels visible), and south elevation openings have had the wooden framing removed. (On the east elevation, there is an original circuit box with copper circuitry extant.) Also on the east elevation, there is a small section, roughly 15' wide, which was originally used for loading on Lucerne Street. These bays have also been infilled with concrete block. This section has had concrete posts and some steel I-beams added.

The second floor is more open. The central area is open under the gable monitor. The monitor is supported by a steel Pratt truss. Camelback trusses act as cross bracing along the slope of the roof, and a small Warren truss runs directly beneath the roof ridgeline. There is also a Warren truss which spans the base of the monitor, extending across the flanking aisles. Lattice I-beams are used as vertical members dividing the central space from the aisles. The aisles are divided into hipped roof sections at the apex of which are

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 9)

round openings for ventilation. These sections have steel roof frames and are edged in concrete. The three connecting walls have been modified with infill or new openings. The Norton Building is now used for can storage.

The Norton Building is architecturally significant as a representative example of nineteenth century factory design in the use of mill construction, brick veneer, segmental arch windows, and little exterior ornamentation. Also, the building represents a transition in the structural methods employed, combining mill construction with steel lattice I-beams and steel roof trusses. Historically, the Norton Building is significant as the only original building still extant and only one of two associated with the Norton Tin Plate and Can Company, which at the turn of the century, was the largest manufacturer of cans in the U.S.

1902 Warehouse:

The 1902 Warehouse abuts the Norton Building to the south. The two story warehouse is also of mill construction with a brick, arcaded veneer and a slightly projecting brick plinth. The building has a roughly triangular plan, measuring 250' x 260'. The flat roof slopes slightly to the north and has two gable monitors of unequal length. This north-sloping roof was evidently designed to force drainage toward the gap between the Norton Building and this warehouse rather than toward the freight loading along the south elevation. The short, west elevation has corbeled arcades, a stepped parapet, and pilasters capped by brick lintels. All the windows on this elevation are now boarded over. The first floor has tall, segmental arch window openings. The second floor had shorter, segmental arch windows, while the third level had flat arch windows. A new, double, metal loading door is centrally located and opens onto an extension of the Norton Building dock.

The south elevation has the same arcaded veneer and a slightly stepped parapet with terra cotta coping. Each arcade has either two segmental arch windows (all boarded) or a loading bay. All openings have brick arches and stone sills. Two of the second floor bays also have freight doors. Although these are now boarded, it is apparent that they also had fanlight transoms. The center bay on the south elevation is larger with wide, double freight doors constructed of diagonal, beaded board and beveled cross bracing. A metal shed roof is suspended over this bay. The westernmost bay of the south elevation projects slightly and has three stories.

The first floor is one open space with wooden posts to which some steel poles have been added. There is an office section along the west elevation. This area appears original with tongue-in-groove, vertical, beaded board paneling and fluted door frames with bull's eye medallions. There is one, six/six light, double hung, sash window. There is also an original wooden staircase. This section projects into the interior space, but ends approximately 15' south of the north wall. The end of this office section marks the end of the original building. This 15' gap between the buildings allowed access for a rail siding where scrap could be emptied from either the Norton Building or the Warehouse. One metal roll door to the west elevation dock has been cut where the spurline once ran. Along the north wall of the office area is evidence of staggered window openings which have been infilled. These windows opened onto the stairwell.

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 10)

All openings on the north and east elevations were modified when the two buildings were joined. (The east elevation is contiguous with the enclosed train shed.) The second floor is also open with wooden vertical members and hardwood floors. The gable monitors have all wood framing with a rafter support and knee brackets. There are triple, six/six light, double hung, sash windows in the monitors although these are covered in corrugated metal. The rafters reveal the extension of the building northward. A wooden horizontal member was inserted under the downsloping member, and posts inserted at the juncture for support. There is a wire cage freight elevator in the southeast corner. The south elevation windows are visible on the interior. There are twelve/twelve light double hung sash windows with a three/three light transom which operates on an axis.

The 1902 Warehouse is significant architecturally as an example of nineteenth century industrial architecture, particularly in the use of mill construction with a relatively unadorned brick exterior. Unlike the Norton Building, the Warehouse employs only the older mill construction structural method rather than steel trusses. Historically, the building is significant as one of the earliest buildings on the site and only one of two extant buildings associated with the Norton Tin Plate and Can Company, then the largest can manufacturer in the U.S.

Loading Area (1936-1952):

The Loading Area is a square (70' X 70'), infill space between the Manufacturing Building and the Lithography Building. Its north elevation borders on Hudson Street which allows access to a large, truck loading dock. This bay is on grade with Hudson Street with room for interior loading. The interior, poured concrete dock is raised 4' above grade. The 20' entrance opening is covered by a large metal roll door. One metal door is located north of the truck entrance. There are also two steel sash factory awning windows on the north elevation, next to the door. East of the loading bay is an "S" curve, concrete ramp leading from the Lithography Building to the dock. The dock and ramp are separated by a partition wall constructed of metal panels and structural tile. The ramp can be closed from the dock by a double door which appears original. The louvered doors are constructed of beaded board with beveled crossing bracing. In the mid-panels of these doors are two/two fixed light windows. The west elevation is the brick east elevation of the Manufacturing Building. In the southwest corner is one metal fire door leading to this building. Only the remnants of a wooden partition wall divides this loading area from the Rescrolling Department.

During the late 1930s and 1940s, a raised concrete deck was poured over the Lucerne Avenue rail tracks to allow for truck shipment, illustrating the adaptation of the site to a new transportation mode. Because the route from this loading dock to the Palletizing Department and the Shipping Warehouse is circuitous, it seems likely that by 1950 this dock would have been used for the transport of equipment and materials rather than product shipment.

Scroll Shear/Rescrolling Department (1942):

The Rescrolling Department is also an infill area between the Manufacturing Building and Lithography, directly south of the truck loading area. It has no exposed elevation. This area spans the long-abandoned Lucerne Street. Rail tracks which once ran north along

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 11)

Lucerne are extant although covered by steel strips. The interior walls of this department are the exterior brick walls of the Manufacturing Building to the west and Palletizing to the south, and the corrugated metal wall of Lithography to the east. The one story space is supported by an east-west row of vertical, I-beam members, just south of the partition wall with the loading dock. The flat roof has a wood frame punctuated by a series of small, gable-roofed monitors which contain industrial fans. There are three openings into the Rescrolling Department. There is a metal fire door in the northwest corner of the room leading to the Manufacturing Building and one steel framed opening in the southwest corner which leads to the rear of the Norton Building. A corresponding opening in the southeast corner leads to the Lithography Building. In the northeast corner is a room, sheathed in corrugated metal, which contains a transformer. Just south of this structure is gas compression equipment.

Palletizing/Shipping Area(1950):

The Palletizing/Shipping Area is also an infill area over the original Lucerne Avenue location. It is located directly south of the Rescrolling Department although access is gained through the rear of the Norton Building. The rectangular room is composed of two sections. The southern third is a large train shed (95' X 220') incorporating rail lines which ran north along Lucerne Avenue. There are two sets of double tracks which enter the shed and punctuate the raised concrete dock. The south elevation is the only exposed wall. It is sheathed in corrugated metal with two large louvered, wooden doors for rail access. The doors are constructed of beaded, vertical board with beveled cross bracing. The upper portion of each door contains two/two fixed light windows although the windows are now covered. The walls of the train shed are the exterior walls of the 1902 Warehouse on the west and the Shipping Warehouse on the east. The upper section of the west wall is sheathed in corrugated metal where the shed extends above the roofline of the 1902 Warehouse. The infilled windows of this warehouse are visible including rough cut stone sills. A corrugated metal partition wall with overhead doors separates the train shed from the northern palletizing department.

The Palletizing Department is a large, one story space measuring 95' X 240'. There is a exterior truck loading dock which projects from the east elevation. This is the only exposed exterior wall. The space is defined by the exterior walls of surrounding buildings. There has been infill of original windows and doors, and new openings cut. The 1902 Warehouse forms the west elevation and the Shipping Warehouse is adjacent on the southeast. The flat, corrugated steel roof is supported by a Pratt truss and also contains steel framed, gable roofed monitors. There are a row of steel I-beam vertical members, running north-south, west of center. The foundation is poured concrete with the same metal stripping over the original Lucerne Avenue rail tracks. Offices have been constructed of concrete block in an L-shaped configuration in the northwest corner. The Mixing and Ink Storage Room projects approximately 40' into the northeast corner where a 20' tall parapet profile, corbeled cornice, and window infill are visible. On the west elevation of this projection is a sliding, metal fire door which connects the palletizing and the ink storage areas.

The concrete truck loading dock opens onto a freight yard which allows shipping from Lakewood Avenue. A corrugated steel canopy covers the dock which is reached from the Palletizing Department by three double, metal, swinging doors.

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 12)

Lithography (ca. 1936):

The Lithography Building is located in the northeast section of the complex. Its west elevation once faced Lucerne Avenue. Its only visible elevation is its north elevation on Hudson Street. The one story structure is divided into two parallel sections. The western portion is the original building according to the Sanborn map of 1914-1951 and company maps. It measures 110' X 200' and is approximately 35' tall. It has a poured concrete foundation, mill construction, and a barrel roof supported by a wooden truss of diagonal cross bracing. The trusses show numerous repairs. The roof is covered in tar paper. The exterior siding is corrugated steel except for the south elevation which is brick veneered. The west elevation is contiguous with the Rescrolling Department and the Loading Area. Its interior sheathing is a combination of composition board, as bestos, and concrete block. The east elevation borders the eastern edge of the property and is not accessible. The Mixing and Ink Storage Room covers a portion of the south elevation. Windows on this elevation have been infilled. The only exterior openings in the original section are on the north elevation. The eastern and western bays of this elevation have two levels of steel sash factory windows, in groups of four. The two central bays have double factory windows. All windows are encased in metal mesh screens. There is also a single steel sash awning window in the southwest corner of this elevation.

The eastern section of this building also has a rectangular plan with a 30' square cut in the northeast corner where a concrete smokestack is located. (The function of the smokestack is unknown as it is not connected to any power source for the complex and is located at some distance from the Boiler House.) This section measures 65' X 200' and is roughly 20' tall. It has a steel frame and a flat roof supported by steel I-beams. Between the two portions is a 3' concrete base into which are set wooden vertical members. The exterior walls are sheathed in corrugated steel. The north elevation of this section has seven bays. A single metal door with a fixed four light window located in the easternmost bay. Other bays contain pairs of steel sash awning windows beneath which are louvered vents. There are no upper level openings. The east elevation is lined with single, steel sash awning windows. The south elevation of the new section has several of these same windows. In the easternmost bay of this elevation is a single metal door reached by interior concrete steps which lead to the Lakewood Avenue freight loading yard.

The interior is a single large space with the concrete base dividing the two sections. Along the north half of the east elevation, there are metal and glass partition offices. South of these offices are wire mesh storage areas. In the northwest corner, there is a large opening for the ramp which connects Lithography with the Rescrolling loading area. Next to this ramp is a small open room, roughly 10' X 20'. (Its use is unknown.) In the southwest corner of the west elevation is the steel framed opening which leads to the Rescrolling Department. In the westernmost bay of the south elevation is the opening which leads to the Mixing and Ink Storage Room. Lithography is the one area where the equipment is still in place. There are eleven, north-south lines of lithographic ovens. Can-body patterns are stored on racks located on the east wall.

Mixing and Ink Storage(ca. 1936; 1944):

The Mixing and Ink Storage Room parallels the Lithography Department on the south. The building is a small, one story structure, rectangular in plan, and measuring 30' X 140'

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 13)

and roughly 25' tall. It has a poured concrete foundation, brick veneer and a flat roof supported by I-beams. Each of the drum rooms has one gable-roofed monitor. The south elevation and short, east elevation are the exposed walls. In the southwest section of the south elevation, infilled windows, a corbeled cornice, and profile of a parapet are visible. This area is located beneath the loading dock canopy.

The entrance is located in the northwest corner where small, mixing chambers, constructed of concrete block, are located. The mixing tanks are extant. Both the north and south elevations of the mixing section of the structure have infilled segmental arch windows and doors. The eastern two-thirds of the structure contains a line of chambers, or cells, where ink drums are stored. (The drum racks are extant.) Each cell measures 20' X 30' and approximately 20' tall. There are sliding metal fire doors which cover the central openings in each of the chamber partition walls. There are also single metal doors in the southwest corners of each chamber. These doors have two/two fixed light windows, now boarded. An identical door is located on the east elevation at the end of this row. There is a sliding metal fire door on the west elevation which connects with Palletizing although the grade in Palletizing is approximately 4' higher than in the Ink Storage Room.

Shipping Warehouse (1952):

The Shipping Warehouse is located on the southeast corner of the site. It is a large, one story structure, roughly square in plan, and measuring 300' X 320'. The building has a poured concrete foundation, concrete structure, and brick veneer. There is a 5' tall concrete base and 3' concrete top edge which delineates the parking lot. The concrete posts are large in diameter and flared at the top. The roof is a flat concrete slab upon which is a rooftop parking lot with an interior entrance ramp along the east elevation wall. The entrance to the ramp is on the south (O'Donnell Street) elevation.

The interior is one large space, broken only by the concrete posts. There is a band of corrugated fiberglass beneath the roofline which permits light. There is one wooden roll door in the northwest corner which leads to the loading dock and another metal roll door in the center of the north elevation. On the west elevation, there are sliding metal fire doors leading to Palletizing. There is no exterior dock to this truck loading bay. There is truck shipping on the south elevation with four, below grade, interior loading bays. The bays have steel-framed openings, measuring roughly 15' X 20', and overhead metal doors. Miscellaneous equipment is currently being stored in this warehouse.

Historical Background

The Baltimore Canning Industry

The Baltimore canning industry began in the 1830s with the migration south of Connecticut and Long Island oyster packers. Facing the depletion of their own crop and increasing legal restrictions against transplanting Chesapeake oysters into Long Island Sound, they moved to Baltimore to be closer to the seemingly limitless supply of the Chesapeake Bay. A thriving and dynamic city in the 1830s, Baltimore had much to offer these northern packers: a choice location at the head of the Chesapeake; a growing economy favorable to

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 14)

new entrepeneurs; an aggressive group of merchants who had developed dense networks of both foreign and domestic trade (such as western expansion of the recently chartered Baltimore & Ohio Railroad); and finally, an available supply of seasonal workers.

The first clear reference to the canning industry in Baltimore appears in the 1836 city directory; Edward Wright advertised himself as a wholesale oyster dealer -- preparing and putting up oysters for export. As the advertisement suggests, the first commodity packed was oysters, both raw oysters shipped on ice, and cooked, or "cove" oysters. By the 1850s, however, canners began to develop technology that enabled them to can fruits and vegetables, particularly peaches, strawberries, tomatoes, corns, and beans. Initially canning these crops was subsidiary to oyster packing. It enabled the packers to keep their canneries operating nearly year-round by simply filling in the summer months when oysters were unavailable. However, due to the depletion of the Chesapeake oyster crop and the growing demand for canned foods by an increasingly mobile and urban population, fruit and vegetable packing dominated the industry by 1880. That year, fruit and vegetable packing accounted for 60% of the total value of canned goods packed in the city; by the late 1890s, it exceeded 95% of the value.

This change in product was paralleled by a rather phenomenal growth of the cannery industry itself. In 1860, there were eighteen canneries in the city, but by 1880 there were 104 canneries. Between 1870 and 1900, the value of the canneries' output increased almost 400%. During these years it was the second-largest industry in Baltimore in both the number of people employed and the value of its product. The canneries loosely encircled the Baltimore waterfront in a horseshoe pattern. The largest number were concentrated along the northeast rim in the areas known as Fells Point and Canton. One seventeen-block stretch contained twenty-three packing houses in 1910. Located between Fells Point and Canton, one block north of the Harbor, this site was thus a natural location for the cannaking industry with easy proximity to its customers.

Food canning is basically a two-step process. The first step is the preparation of raw products -- shucking oysters, peeling tomatoes, snipping beans -- and inserting these raw foods into cans. In Baltimore this work was typically done by two groups of people: black men who shucked raw oysters, and immigrant women and their children who prepared fruits and vegetables. The second step in canning includes -- often in several stages -- capping the cans which is followed by cooking, or processing the canned food. This work was typically done by adult white men.

The Canton district, with good rail and water connections as well as a nearby labor force, was advantageous for such an industry. The development of this district is generally credited to a group of New York investors, organized under the aegis of the Canton Company. The company actively sought immigrant populations in an effort to attract industry to the area, recruiting from specific European countries as early as 1872. In 1880, forty six percent of Canton residents were identified with industry. The Canton Company was directly involved in establishing ethnic neighborhoods in the Canton District which through its success resulted in residential stability and continuity. After the turn-of-the-century, however, fundamental changes transpired in the industrial base. Industries were steadily purchased by non-local interests, gradually eliminating the personal relationships

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 15)

between employer and employee. The American Can Company represented one of these new industries.

The American Can Company

In 1869, Edwin Norton, a tinsmith by trade, and his brother organized the Norton Brothers Co. of Chicago to manufacture tea and coffee cannisters along with other hand-decorated ware. By 1883, the company had developed among the most successful automatic lines for tin can production. The reorganized Norton Tin Can & Plate Company opened several can manufacturing plants around the country including the plant on this site in Baltimore. At the time of the formation of the American Can Company (March 1901), the Norton Company was the largest can manufacturer in the country. By acquiring the Norton Company, American Can from the outset had top-of-the-line equipment for can manufacturing. Underscoring the importance of the Norton acquisition, Edwin Norton himself became the first president of the American Can Company.

In 1908, American Can purchased the Sanitary Can Company of New York, which had pioneered the development of the open-top or "sanitary" can. The open-top can process eliminated one of the soldering steps, specifically the soldering of caps which the hole-intop can process required. Through this innovation, the company consolidated its control of the most efficiently produced and increasingly popular form of can. In order to consolidate its assets, American Can quickly shut down many of the smaller can-making plants acquired in its incorporation. However, the Baltimore plant remained one of its most productive operations. It was situated in a prime location for can manufacture: canneries and clients were literally across the street as well as in the surrounding countryside; tin plate was available from Bethlehem Steel in Sparrows Point; and both rail and water transportation for shipping were easily accessible.

The Canton community in which the American Can plant is located has maintained an extraordinary degree of residential stability since its founding in the 1840s. Such stability is generally credited to the availability of local employment. In 1925, for example, 58% of Canton residents were working within the community. Canton has remained a heavily ethnic neighborhood. As mentioned earlier, agents from the Canton Company actively recruited Europeans in the nineteenth century. Later, the presence of fellow immigrants, along with the availability of employment and homes encouraged more immigrants to settle there. Through the 1880s, German, and to a lesser extent Irish and Welsh, immigrants populated the area. By 1880, Polish and Czech (Bohemian) immigrants began settling there. Each group set up its own network of ethnic institutions, particularly religious, that further bound people to the community.

By the time American Can began operating soon after the turn of the century, the neighborhood was heavily Polish which was reflected in the company's work force. Most of the jobs were unskilled machine tending and semiskilled inspecting jobs, which immigrants -- with few industrial skills but a strong work ethic -- could readily fill. Although both men and women were employed at this American Can Company plant from the outset, the proportion of women increased over time.

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 16)

The incorporation of the American Can Company in 1901 was the culmination of several decades of development in the can-making industry. It was organized by William H. Moore, Daniel Gray Reid, and William B. Leeds, who eleven years prior had taken advantage of a high protective tariff on imported tin and the powerful steel trust to organize the conglomerate, the American Tin Plate Company. The organization of American Can was a local outgrowth of this earlier venture as it aimed to gain control of one of the largest consumers of tin plate, the can-making industry. It combined 123 companies, was capitalized at \$88,000,000, and became the largest can producer in the world producing 48% of all cans in the 1930s.

Can Technology

The tin "can" -- an American abbreviation of the English word, "cannister" -- was patented in America in 1839. Initially, cans were made out of glass, but tin soon prevailed for several reasons. There were a number of advantages to the use of tin cans over glass containers. Tin cans could be rapidly filled and sealed airtight, were easily adapted to different shapes and sizes, and used a process which was inexpensive enough to make tin canning profitable.

Initially, cans were made by hand. The can maker would cut the top, bottom and body from a sheet of tinplate with hand shears, shape them with a set of hammers and stakes, and then solder the individual pieces together. A skilled can-maker could produce about five cans an hour.

The first innovation over the three-piece tin can was the hole-and-cap (HAC), developed in the early nineteenth century, which had a 1" filler hole in the top through which food could be inserted. The food was then processed and a cap was soldered over the hole. This method was unreliable with an unacceptable percentage of "leakers", cans that swelled or burst. It was soon improved upon by the hole-in-cap (HIC) which appeared by 1820. Although still completely handmade and filled in the same manner, the HIC had a small pinhole vent in the cap which was sealed with a drop of solder during processing. This allowed the can to be sealed more readily after the steam had escaped negating spoilage and therefore reducing the number of "leakers."

The first significant change from handmade methods occurred in the late 1840s with the development of hand powered machines for cutting and rolling the can bodies into shape, and presses for punching and flanging the ends. These mechanized processes were generally carried out by young boys which allowed can makers to concentrate on the most skilled aspect of their work -- soldering the pieces of tinplate together. By using pre-cut parts, can makers were able to increase their output to a range of 50 to 70 cans per hour. Can making emerged as a separate branch of the tinsmithing trade by the mid-1860s.

Few technological advances were made in canning prior to the Civil War, the most significant development being the combination die to stamp out can ends, a process which was originated by William Numsen & Son of Baltimore in 1848. However, many developments occurred in can technology during the mid-to-late nineteenth century in response to both the increased demand by an expanding American population and to

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 17)

changes in food processing. Two important developments occurred just prior to the Civil War. In 1856, the Borden Company was granted a patent for vacuum processing condensed milk which greatly increased the demand for tin cans. The second development occurred in 1861 when it was found that the addition of calcium chloride to the cooking water raised the temperature, and thus, increased the reliability of the canning process.

During the mid-1870s, changes in can technology were stimulated by advancements in metallurgy -- allowing thinner tinplate coatings -- and by labor problems. The Howe Floater was developed to reduce the dependence on laborers; this device soldered the can ends automatically by rolling them at an angle in a solder bath. Also, shortly thereafter, the Jones Block was developed. This machine was used to wrap the body of the can around a horn in order to lap the side seam. Besides the few men needed to run the machines, laborers were only needed to apply the solder.

During the early 1880s, the most skilled aspects of can production -- soldering the parts of the can together -- became automated. Two developments were particularly instrumental in automation of can-making: the Mirriam Little Joker, introduced in 1880, and the Norton Company's semi-automatic side seamer, introduced in 1883. The Mirriam "Little Joker" was an improvement over the Howe Floater. It was only sixteen inches long and eight inches high but increased the production rate of the individual can-maker by five times. The Norton Company's side seamer eliminated the last remaining hand process of can making. Norton unsuccessfully experimented with a system of solderless double seaming, but succeeded in patenting a process for making ribbon solder by pouring molten metal between two revolving steel rolls which cooled the solder. Max Ams of the New York-based, Max Ams Machine Company, made a major technological breakthrough for the canning industry in 1888 by introducing the double seam method for side seaming cans. By 1884, approximately one-third of all cans produced in the city were machine-made. The Cox Capper, introduced in 1884, which automatically capped the filled cans, further threatened the need for the can-maker's skill and power. In addition to these other technological developments, multi-color lithography was also implemented during the 1880s.

Improvements in machine soldering during the 1890s led to what was called the automatic line: the automation of the entire shaping and soldering processes of can-making through a series of interfacing machines. The automatic line was four times faster than hand can-makers and was calculated to reduce costs by more than 25%. All vestiges of hand can-making were made obsolete by the development of the sanitary can. The sanitary can was an open-top rather than a hole-in-top can, which therefore required no separate soldering on of caps. Furthermore, through an intricate system of interlocking end and side seams, it replaced the need for solder to make it airtight, requiring only a thick rubber gasket. The can-makers claim that machine-made cans were dangerous went unheeded.

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 18)

Can Production Process

Can production at American Can Company's Baltimore plant was a comprehensive process. Aside from the raw tinplate material which was brought in by rail, the entire product was manufactured on site. Once manufactured, the can bodies were shipped with the lids separately packaged to the packer for filling and capping. The equipment and facilities were constantly being upgraded producing the piecemeal appearance of the complex and the process. Nevertheless, each department clearly had an assigned role in production, and the evolution of the site illustrates a response to these roles.

Eleven separate processes were required to make a can on the fully automated line. It was a completely mechanical process by the mid-1900s with the exception of a few packing and shipping methods. American Can Company's Baltimore plant alone was producing 700 million cans per year by 1950.

Coils of tinplate arrived by rail at the coil receiving area (A). Typically, the tinplate was already coated on the underside with the appropriate enamel compound, but occasionally it was treated in the lithography department. The coils were transferred to the coil cutting area (B) where they were cut and pressed into flat sheets. The first step in the can forming process was metal scrolling which also occurred in this department. Scrolling refers to the initial cutting of the edges of the tin sheets into can-body shapes. The sheets were then sent to the scroll shearing/rescrolling department (C) where they were rescrolled for optimal usage of the tinplate and cut into various sizes depending on can dimensions and the number of cans to be cut from each sheet. The tinplate sheets were separated here depending on whether they were scrolled and cut for the can ends (end sheets) or the can body (body sheets).

If the product were to have a paper label, the sheets would proceed to the manufacturing lines on the first floor of the main factory (E). However, many packing customers had the label directly applied on the tinplate by lithography at the plant. The lithograph was produced from transparent copies of the design: up to six colors could be applied onto the base tinplate. The tin sheets were placed on a feeder rack at the front of the "litho" ovens and fed through a printer; printing machines were sometimes placed in tandem to reduce the number of passes a particular emblem required. Occasionally, the can contents required an additional undercoating which was applied by the coater immediately following the printers. Next, the printed sheets were removed from the rollers and tipped upright by a series of wickets on a conveyor system. This allowed the sheets to remain separated and the ink to dry as they passed through the ovens. The sheets were then emptied onto a stacker which when full, released the stack of tinplate onto rollers to be carted to the cutters.

After the body sheets were cut into individual "blanks" they were sent to a draw press or body maker (E). In forming the can body, the draw press notched and slit the corners of the blank turning back each end to form an interlocking seam. Next, flux was applied on the outside of the can -- before and after the seam was pressed tight -- followed by molten solder. The final step in making the can body was performed by the flanger which curled the rims at each end.

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 19)

Meanwhile, the end sheets were sent to the double die presses which punched the can ends from the scrolled tinplate (E). The ends were first passed through a machine that curled the rims, and then coated with a rubber compound application to help in sealing the cap airtight. The bottom ends were then attached to the can body in the header machine and secured on by the crimper (E). Subsequently, the open can was delivered to the floater which completed the soldering of the side seam and end piece. The final stage was the tester which ensured that the can was airtight by covering the open end, injecting air under pressure, and plunging it into a tub of water by a revolving wheel. If bubbles appeared the can was rejected (E). Cans which passed safety inspection were sprayed with lacquer, dried in ovens, and dropped onto conveyors on the first floor. From here they were boxed and placed on palettes for shipping (G).

American Can Company (Norton Tin Plate and Can Co.) HAER No. MD-63 (Page 20)

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